Yuchen Zhao

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Education

2013–2017	**Ph.D., Computer Science**, *University of St Andrews*, St Andrews, UK.
2011–2013	**M.Sc., Information Security**, *Wuhan University*, Wuhan, China.
2007–2011	**B.Eng., Information Security**, *Huazhong University of Science and Technology*, Wuhan, China.

Appointments

10/2019–	**Research Associate**, *Dyson School of Design Engineering*, Imperial College London, London, UK.
07/2018–10/2019	**Research Fellow**, *School of Electronics and Computer Science*, University of Southampton, Southampton, UK.
07/2017–06/2018	**Research Fellow**, *Cyber Security Centre*, De Montfort University, Leicester, UK.

Publications

[1] Y. Zhao, S. S. Afzal, W. Akbar, O. Rodriguez, F. Mo, D. Boyle, F. Adib, and H. Haddadi. Towards Battery-Free Machine Learning and Inference in Underwater Environments. In *Proceedings of the 23rd International Workshop on Mobile Computing Systems and Applications*, HotMobile '22, Tempe, Arizona, Mar. 2022. (Accepted).

[2] Y. Zhao, P. Barnaghi, and H. Haddadi. (Preprint) Multimodal Federated Learning, 2021. arXiv:2109.04833, Online at https://arxiv.org/abs/2109.04833.

[3] Y. Zhao, H. Liu, H. Li, P. Barnaghi, and H. Haddadi. (Preprint) Semi-supervised Federated Learning for Activity Recognition, 2021. arXiv:2011.00851, Online at https://arxiv.org/abs/2011.00851.

[4] F. Palermo, H. Li, A. Capstick, N. Fletcher-Lloyd, Y. Zhao, S. Kouchaki, R. Nilforooshan, D. Sharp, and P. Barnaghi. (POSTER) Designing A Clinically Applicable Deep Recurrent Model to Identify Neuropsychiatric Symptoms in People Living with Dementia Using In-Home Monitoring Data. In *NeurIPS '21 Workshop - Bridging the Gap: From Machine Learning Research to Clinical Practice*, 2021. arXiv:2110.09868, Online at https://arxiv.org/abs/2110.09868.

[5] Y. Zhao, H. Haddadi, S. Skillman, S. Enshaeifar, and P. Barnaghi. Privacy-Preserving Activity and Health Monitoring on Databox. In *Proceedings of the Third ACM International Workshop on Edge Systems, Analytics and Networking*, EdgeSys '20, page 49–54, Heraklion, Greece, Apr. 2020. https://doi.org/10.1145/3378679.3394529.

[6] Y. Zhao and I. Wagner. Using Metrics Suites to Improve the Measurement of Privacy in Graphs. *IEEE Transactions on Dependable and Secure Computing (TDSC)*, pages 1–1, 2020. https://doi.org/10.1109/TDSC.2020.2980271.

[7] T. Blount, L. Koesten, Y. Zhao, and E. Simperl. Understanding the Use of Narrative Patterns by Novice Data Storytellers. In *Proceedings of the 4th International Conference on Computer-Human Interaction Research and Applications*, pages 128–138, 2020. https://doi.org/10.5220/0010121601280138.

[8] Y. Zhao, T. Blount, L. Koesten, and E. Simperl. Structured and Uncertainty-Aware Data Storytelling. In *CHI '19 Workshop on HCI for Accurate, Impartial and Transparent Journalism: Challenges and Solutions*, Glasgow, UK, May 2019. Online at https://bit.ly/3bSkuVh.

[9] Y. Zhao and I. Wagner. On the Strength of Privacy Metrics for Vehicular Communication. *IEEE Transactions on Mobile Computing (TMC)*, 18(2):390–403, Feb. 2019. https://doi.org/10.1109/TMC.2018.2830359.

[10] Y. Zhao and I. Wagner. POSTER: Evaluating Privacy Metrics for Graph Anonymization and De-Anonymization. In *Proceedings of the 2018 on Asia Conference on Computer and Communications Security*, ASIACCS '18, page 817–819, Incheon, Republic of Korea, 2018. https://doi.org/10.1145/3196494.3201586.

[11] Y. Zhao. *Recommending Privacy Preferences in Location-sharing Services*. PhD thesis, University of St Andrews, June 2017.

[12] Y. Zhao, J. Ye, and T. Henderson. A Robust Reputation-Based Location-Privacy Recommender System Using Opportunistic Networks. In *Proceedings of the 8th EAI International Conference on Mobile Computing, Applications and Services*, MobiCASE'16, page 62–73, Cambridge, Great Britain, 2016. https://doi.org/10.4108/eai.30-11-2016.2267031.

[13] Y. Zhao, J. Ye, and T. Henderson. The Effect of Privacy Concerns on Privacy Recommenders. In *Proceedings of the 21st International Conference on Intelligent User Interfaces*, IUI '16, page 218–227, Sonoma, California, USA, Mar. 2016. https://doi.org/10.1145/2856767.2856771.

[14] Y. Zhao. Usable Privacy in Location-Sharing Services. In *Companion Publication of the 21st International Conference on Intelligent User Interfaces*, IUI '16 Companion, page 110–113, Sonoma, California, USA, Mar. 2016. https://doi.org/10.1145/2876456.2876458.

[15] Y. Zhao, J. Ye, and T. Henderson. Privacy-Aware Location Privacy Preference Recommendations. In *Proceedings of the 11th International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services*, MOBIQUITOUS '14, page 120–129, London, United Kingdom, Dec. 2014. https://doi.org/10.4108/icst.mobiquitous.2014.258017.

[16] Y. Zhao, J. Ye, and T. Henderson. (POSTER) Recommending Location Privacy Preferences in Ubiquitous Computing. In *Proceedings of the 7th ACM Conference on Security and Privacy in Wireless and Mobile Networks*, WiSec '14, Oxford, United Kingdom, July 2014. Online at http://hdl.handle.net/10023/5075.

Service

Technical programme committees

2022 **Program committee, The 2nd IEEE/IFIP International Workshop on Internet of Things Management (Manage-IoT '22, co-located with IEEE/IFIP NOMS '22)**, *April, 2022*, Budapest, Hungary.

2021 **Program committee, The 1st Workshop on Security and Privacy for Mobile AI (MAISP '21, co-located with ACM MobiSys '21)**, *24 June, 2021*, Online, Worldwide.

2020 **Program committee, The 14th ACM Conference on Recommender Systems (RecSys '20)**, *22-26 September, 2020*, Online, Worldwide.

2019 **Program committee, Demo & LBR of the 27th ACM Conference on User Modelling, Adaption and Personalization (UMAP '19)**, *9-12 June, 2019*, Larnaca, Cyprus.

Program committee, The 27th ACM Conference on User Modelling, Adaption and Personalization (UMAP '19), *9-12 June, 2019*, Larnaca, Cyprus.

2018 **Poster committee, The 16th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys '18)**, *10-15 June, 2018*, Munich, Germany.

Organising Committee

2020 **Local arrangements co-chairs, The 26th Annual International Conference on Mobile Computing and Networks (MobiCom '20)**, *21-25 September, 2020*, London, United Kingdom.

Reviewer

2021 **IEEE Transactions on Information Forensics and Security**.

IEEE Transactions on Big Data.

2020 **IEEE Transactions on Big Data**.

Computers & Security.

2018 **Computer Communications**.

Journal of Information Security and Applications.

2016 **The 13th International Conference on Wirtschaftsinformatik**, *February 12-15, 2017*, St. Gallen, Switzerland.

Policy & Internet.

2015 **The 12th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC '15)**, *August 10-14, 2015*, Beijing, China.

The 7th EAI International Conference on Mobile Computing, Applications and Services (MobiCASE '15), *November 12-13, 2015*, Berlin, Germany.

Student Volunteer

2016 **The 8th EAI International Conference on Mobile Computing, Applications and Services (MobiCASE '16)**, *Cambridge*, UK.

The 21st International Conference on Intelligent User Interface (IUI '16), *Sonoma, CA*, USA.

Talks

2021 **"Federated Learning in the Wild"**, *Brave Research Reading Session*, Online.

"Smart Healthcare using IoT Data and Machine Learning", *Sensing and the Internet of Things*, Online.

"IoT Technology based Solutions to Challenges in Healthcare", *ULTRATOOL-IoT Student Project*, Online.

2020 **"IoT Technology based Solutions to Challenges in Healthcare"**, *Sensing and the Internet of Things*, Online.

"Privacy-preserving Activity and Health Monitoring on Databox", *The Third ACM International Workshop on Edge Systems, Analytics and Networking*, Online.

2018 **"Human Data Interaction"**, *WAIS Seminar*, Southampton.

2017 **"A Robust Reputation-based Location-privacy Recommender System using Opportunistic Networks"**, *The Scottish Networking Event (SCONE)* , Glasgow.

2016 **"A Robust Reputation-based Location-privacy Recommender System using Opportunistic Networks"**, *The 8th EAI International Conference on Mobile Computing, Applications and Services*, Cambridge.

"Usable Privacy in Location-Sharing Services", *The Student Consortium of the 21st International Conference on Intelligent User Interfaces*, Sonoma.

"The Effect of Privacy Concerns on Privacy Recommenders", *The 21st International Conference on Intelligent User Interfaces*, Sonoma.

2014 **"Privacy-aware Location-privacy Preference Recommendations"**, *The 11th International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services*, London.

"Privacy-aware Location-privacy Preference Recommendations", *The Scottish Networking Event (SCONE)*, Edinburgh.

Funding

2013–2017 **600th Anniversary Scholarship (award rate = 7/80)**, *University of St Andrews*.

2016 **IUI 2016 Student Travel Grant**.

Student Supervision

2021– ICL **Ph.D (as assistant supervisor)**, Mengjia Niu.

2021– ICL **Ph.D (as assistant supervisor)**, Yushan Huang.

2020–2021 ICL	**Undergraduate Research Opportunity Programme**, Leonardo Bossi.
2019–2020 ICL	**Undergraduate Research Opportunity Programme**, Hanyang Liu and Danni Shi.

Teaching

2021-2022 ICL	**Guest lecturer**, Sensing and Internet of Things.
2020-2021 ICL	**Guest lecturer**, Sensing and Internet of Things.
	Tutor, Design Engineering Futures.
2018–2019 Southampton	**Tutor**, COMP6234 (Data Visualisation).
2016–2017 St Andrews	**Demonstrator**, CS1002 (Object-Oriented Programming).
	Demonstrator, CS2001 (Foundations of Computation).
	Demonstrator, CS2003 (The Internet and the Web: Concepts and Programming).
2015–2016 St Andrews	**Tutor**, CS1002 (Object-Oriented Programming).
	Tutor, CS1006 (Programming Projects).
	Demonstrator, CS1002 (Object-Oriented Programming).
	Demonstrator, CS2001 (Foundations of Computation).
	Demonstrator, CS2003 (The Internet and the Web: Concepts and Programming).
2014–2015 St Andrews	**Tutor**, CS1006 (Programming Projects).
	Demonstrator, CS1002 (Object-Oriented Programming).
	Demonstrator, CS1003 (Programming with Data).
	Demonstrator, CS1006 (Programming Projects).
	Demonstrator, CS2003 (The Internet and the Web: Concepts and Programming).